UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,127	06/06/2001	Theodore F. Rabenko	1875.0630001	7884

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EXAMINER
WILSON, ROBERT W

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/874,127	RABENKO, THEODORE F.
	Examiner	Art Unit	
	Robert W. Wilson	2661	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 October 2005</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claims 15-24 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

Referring to claim 15, what is meant by "a buffer"? The first voice packet is transferred to "a

buffer" and the second voice packet is transferred to "a buffer". Are these buffers the same

buffer of different buffers?

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo in view of

Frankel (U.S. Patent No.: 6,075,784)

The applicant has used wording "adapted to" in claims 1-7 which according to the MPEP

Chapter 2106 II C means that the limitation is optional.

Referring to claim 1, Seo teaches: Telephony system per Fig 3. The VoIP board is the first voice

processing module. The CPU is the host processor which is coupled to the VoIP board . The

SRAM or buffer is coupled directly to the CPU or host processor and the VoIP board is coupled

to the SRAM through the CPU per Fig 3. Seo does not expressly call for: a 2nd Voice processing

module or 2nd VoIP board which is coupled the same as the first.

Frankel teaches: 2nd CODEC or voice module per Fig 2. It would have been obvious to one of

ordinary skill in the art at the time of the invention to add a second voice module as shown by

Frankel to the system of Seo in order for the system to scale to support more inputs.

In addition Seo teaches:

Regarding claim 3, the cable modem per Fig 3 is utilized in a HFC network

Regarding claim 4, CPU or host processor per Fig 3

Regarding claim 5, VoIP board has a VoIP processor or signal processor per Fig 3. .

In addition the combination of Seo and Frankel teaches:

Regarding claims 2 & 6, first and second VoIP or parallel processing.

Regarding claim 7, multiple SLIC inputs.

5.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seo in view

Frankel (U.S. Patent No.: 6,075,784) further in view of Rosenberg (U.S. Patent No.; 6,304,567).

Referring to claim 8, the combination of Seo and Frankel teach: the telephony system of claim 1.

The combination of Seo and Frankel do not expressly call for: for: wherein said assembled

packet comprises packet layer overhead, media access layer overhead, said first voice packet and

said second voice packet.

Rosenberg teaches: wherein said assembled packet comprises packet layer overhead, media

access layer overhead, said first voice packet and said second voice packet.

contains the first and second voice packet and inherently contains the MAC layer per Fig 3.

It would have been obvious to add the first and second voice packet with inherent mac layers of

Rosenberg to the system of the combination of Seo and Frankel in order to build a system which

increases the efficiency of the system for by decreasing the overhead.

6.   Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo in

further in view of Frankel (U.S. Patent No.: 6,075,784).

The applicant has used wording "adapted to" in claims 9-13 which according to the MPEP

Chapter 2106 II C means that these limitations are optional.

Referring to claim 9, Seo teaches: a telephony system per Fig 3. The mainboard is the cable

modem device with the following: RF module or cable modem, CPU or host processor, and a

memory or buffer per Fig 3. The VoIP board is the first processing module coupled to the RF

modem or cable modem. The VoIP board includes a CODEC or first voice processing module.

The CODEC receives analog input from the SLIC. The MPEP teaches that using "adapted to"

with limitations means that they are optional and therefore are treated as intended use without

weight. The reference also teaches a CPU or host processor which is within the main board or

cable modem device.

Seo does not expressly call for: a second processing module coupled to said cable mode device

whether said second processing module includes a second voice processing module.

Frankel teaches: a second module with a CODEC for a second voice input per Fig 2. It would

have been obvious to one of ordinary skill in the art at the time of the invention to add a VoIP

board or second processing module to the architecture of SEO in order for the system to scale.

Referring to claim 10, the combination of Seo and Frankel teaches: the telephony system of

claim 9 and a first and second module. The combination of Seo and Frankel does not expressly

call for: parallel processing. Frankel teaches: packets are developed in parallel per Fig 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention to at the

parallel processing of Frankel to the system of the combination of Seo and Frankel in order for

the system to scale.

Referring to claim 11, the combination of Seo and Frankel teaches: the telephony system of

claim 9 and a first and second module. The applicant broadly claims "DSP". The combination of

Seo and Frankel does not expressly call for: DSP It would have been obvious to one of ordinary

skill in the art at the time of the invention that the CODEC performs the same function as the

DSP.

Referring to claims 12 & 13, the combination of Seo and Frankel teaches: the telephony system

of claim 9 and a first and second module which are coupled. The applicant again claims

"adapted to" which the examiner has treated as optional requirements. . The combination of Seo

and Frankel does not expressly call for: audio modules. Frankel teaches : first and second SLIC

or audio modules per Fig 2. It would have been obvious to one of ordinary skill in the art at the

time of the invention to add the first and second SLIC or Audio modules in order for the system

to scale.

7.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seo in view

Frankel (U.S. Patent No.: 6,075,784) further in view of Rosenberg (U.S. Patent No.; 6,304,567).

Referring to claim 14, the combination of Seo and Frankel teach: the telephony system of claim

9. The combination of Seo and Frankel do not expressly call for: for: wherein said assembled

packet comprises packet layer overhead, media access layer overhead, said first voice packet and

said second voice packet.

Rosenberg teaches: wherein said assembled packet comprises packet layer overhead, media

access layer overhead, said first voice packet and said second voice packet.

contains the first and second voice packet and inherently contains the MAC layer per Fig 3.

It would have been obvious to add the first and second voice packet with inherent mac layers of

Rosenberg to the system of the combination of Seo and Frankel in order to build a system which

increases the efficiency of the system for by decreasing the overhead.

8.   Claims 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo in view

of Frankel (U.S. Patent No.: 6,075,784) further in view of Rosenberg (U.S. Patent No.;

6,304,567)

The applicant does not use the words "adapted to" in claims 15-24 therefore the examiner the

rejection addresses all of the limitations.

Referring to claim 15, Seo teaches: Fig 3 teaches a telephony system. "Reducing delay" only

appears in the preamble so it is treated as an intended use.

The VoIP receives the first digital voice signals from the CLIC module from a plurality of

subscriber lines. The VoIP processor or first voice processing module compresses the digital

voice signal and creates a packet. The packet is transferred to the SRAM or buffer

Seo does not expressly call for: a second voice processing module or assembling and

transmitting of a packet comprising the first and second voice packet over a data network.

Seo does not expressly call for: a 2nd Voice processing module or 2nd VoIP board which is

coupled the same as the first.

Frankel teaches: 2nd CODEC or voice module per Fig 2. It would have been obvious to one of

ordinary skill in the art at the time of the invention to add a second voice processing module as

shown by Frankel to the system of Seo in order for the system to scale to support more inputs.

The combination of Seo and Frankel does not expressly call for: assembling and transmitting of a

packet comprising the first and second voice packet over a data network.

Rosenberg teaches: assembling and transmitting of a packet comprising the first and second

voice packet over a data network per col. 3 line 18-col. 5 line 4.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add

assembling and transmitting of a packet comprising the first and second voice packet over a data

network Rosenberg to the CPU or processor of the combination of Seo and Frankel in order to

increase the efficiency of the system by decreasing the overhead.

Referring to claim 16, the combination of Seo, Frankel, and Rosenberg teach: the method of

claim 15 and a first and second digital signals compressed in parallel paths

The combination of Seo, Frankel, and Rosenberg do not expressly call for: parallel processing

but teaches parallel paths.

It would have been obvious to one of ordinary skill in the art at the time of the invention to

implement parallel processing on parallel paths in order to decrease the throughput time.

In addition Seo teaches:

Regarding claim 17, the cable modem per Fig 3 is utilized in a HFC network

Regarding claim 18, the cable modem per Fig 3 is utilized in a HFC network and inherently

transmits the assemble packets during upstream bursts.

Regarding claim18, VoIP board has a VoIP processor or signal processor per Fig 3. .

Regarding claim 19-21. the SLIC receives the analog signals and converts them to digital per Fig

3.

Referring to claim 22, the combination of Seo, Frankel, and Rosenberg teaches the telephony

system of claim 1. The combination of Seo, Frankel, and Rosenberg does not expressly call for:

wherein said assembled packet comprises packet layer overhead, media access layer overhead,

said first voice packet and said second voice packet.

Rosenberg teaches: RTP packet which contains the first and second voice packet and inherently

contains the MAC layer per Fig 3.

It would have been obvious to add the first and second voice packet with inherent mac layers of

Rosenberg to the system of the combination of Seo, Frankel, and Rosenberg in order to build a

system which increases the efficiency of the system for by decreasing the overhead.

9.   Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo,

Frankel (U.S. Patent No.: 6,075,784) in view of Rosenberg (U.S. Patent No.; 6,304,567) further

in view of Bertagna (U.S. Patent No.: 6,088,745).

Referring to claim 23, the combination of Seo, Frankel, and Rosenberg teach: the method of

claim 15, wherein the first voice packet and the second voice packet is transferred to q queue or

buffer. The combination Seo, Frankel, and Rosenberg do not expressly call for: a first and

second DMA transfer. Bertagna teaches: DMA transfer from memory per col. 1 line 7-col. 2 line

12 and col. 3 line 40-col. 4 line 5. It would have been obvious to one of ordinary skill in the art

at the time of the invention to add the DMA transfer of Bertagna to the device of the combination

of Seo, Frankel, and Rosenberg in order to avoid contention between packets being transferred

Referring to claim 24, the combination of Seo, Frankel, and Rosenberg teach: the method of

claim 15. The specification defines a segmented DMA transfer is the same as a linked list DMA

transfer per Pg 17 Para [0065]. The combination Seo, Frankel, and Rosenberg do not expressly

call for: wherein said first DMA transfer and said second DMA transfer are segmented

DMAtransfers. Bertagna teaches: linked list DMA or segmented DMA transfer per col. 1 line 7-

col. 2 line 12 and col. 3 line 4—col. 4 line 5. It would have been obvious to one of ordinary skill

in the art at the time of the invention to add the linked list or segmented DMA transfer of

Bertagna to the method of the combination of Seo, Frankel, and Rosenberg in order to avoid

contention between packets being transferred.

Response to Amendment

10.   Applicant's arguments with respect to claims 1-24 have been considered but are moot in

view of the new ground(s) of rejection.

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

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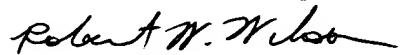
Robert W Wilson
Examiner
Art Unit 2661

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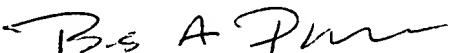
BOB PHUNKULH
PRIMARY EXAMINER